FUNDING ISSUES ASSOCIATED WITH SCHOOLING
IN GHANA AND ALASKA

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May 2, 2007
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THESIS

Presented to the Faculty of the University of Alaska Fairbanks

in Partial Fulfillment of the Requirements

for the Degree of

MASTER OF SCIENCE

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Fairbanks, Alaska

May2007

Abstract

This thesis provides a comparative analysis of the educational funding systems in Ghana and Alaska. The issues discussed in this thesis include the equitable and adequate distribution of funding for the educational needs of the various school districts in both countries.

This study will focus on three areas:

- Review of the history and foundation of education in the Alaska, and Ghana.
- Study of education funding for K-12 education in Alaska and Ghana.
- Making a determination on whether educational funding in Alaska and Ghana is sufficient to meet the funding needs of K-12 schools.

In this study I will be attentive to two major areas:

- Adequacy – Is the money being spent sufficient?
- Equity – Is there equal funding for all K-12 schools in Alaska and Ghana?

The goal of this research is to learn through this research more about adequacy and equity

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Chapter One

INTRODUCTION

Equity and adequacy are two important issues in the funding of education in Alaska as well as in Ghana. Ghana and Alaska share a similar experience in how education is funded. In this study I will be looking at the historical context of education, as well as how education is funded in both places and how equitable and adequate the funding of education is in both places.

I will begin by examining the historical context of education in Alaska and Ghana, from the introduction of formal education to the status of schooling in Ghana and Alaska as it exists today. I am using Ghana and Alaska in this study because Alaska has a lot to offer to Ghana's educational system in terms of lessons on equitable and adequate funding for all students. I also believe Alaska and Ghana also share similar experiences in the funding of urban education as compared to rural education and how that impacts the kind of education that is provided for students.

Regarding the education funding system in Alaska, I will examine the disparities that exist in the funding of K-12 education among schools in the state. Some of these disparities have historical, constitutional, and social origins, and it is important that Ghana learn from Alaska to make education accessible, equitable and adequate for all its citizens. Spending disparities exist in many school districts in Alaska as well in Ghana, and this can be seen by comparing urban schools and rural schools and how they are funded.

This area of study has become important because without equitable or adequate funding of education, the quality of education will differ and students coming out of the

educational system will not have equal opportunity in their pursuit of knowledge or in their quest to gain the necessary skills to be competitive globally. This area of study has also become important because of the unfair distribution of educational funding in Alaska and Ghana, so ways must be found to make education fair and equitable for all students, whether they are in rural or urban areas. The question is, can we equip teachers and educational practitioners to make the necessary adjustments to make sure that all children and students in Alaska and Ghana are given the chance to succeed?

The study is aimed at understanding how educational funding works in Ghana and Alaska and how the funding systems impact school districts in providing of education that is adequate for all students. Through such understanding, we can empower the community, parents and teachers to be stakeholders in the educational process and to make sure that they are involved in the decision making of their children's education. Through this study we can gain an understanding of the complex nature of education funding and its implications for students, the community and society as a whole. It is imperative that decision makers involve parents and the community in finding ways of funding education and make it fair and just for all students.

Although equity and adequacy are important and central to the funding of education, it is one piece of the puzzle and there are other problems associated with funding that need to be looked at as well. It is also important that we do not forget about making sure that teachers and educational administrators get all the support and help they need in providing a quality education that is accessible to all students, whether it is in Ghana or Alaska. I believe that Ghana can learn from the Alaska educational experience

and find ways of decentralizing its educational system and giving the control back to local communities.

Chapter Two

HISTORY OF EDUCATION IN ALASKA

The history of formal education in Alaska can be divided into four parts: the Russian period; the early American period; years when Alaska was a territory; and years when Alaska became a state and part of the United States. These times are pivotal to the educational process in Alaska since they helped define what kind of education will be provided in the State and the educational history of the State.

2.1 The Russian Period:

The Russian presence in Alaska was primarily for the exploitation of natural resources, particularly for fur-bearing marine animals. It is estimated that in the first hundred years of Russian occupation, the number of Aleuts, the Native group most affected by enslavement and other adverse effects of the Russian occupation, declined from a pre-contact population of 16,000 to 2,200 (Darnell & Hoem, 1996).

The Russian Orthodox Church played a major role in the establishment of formal education in Alaska. It was, however, Gregory Shelikov, the head of a fur trading company seeking a monopoly on fur harvesting in Alaska, who helped the effort to begin formal schooling in Alaska. He once stated that "only literate people can be good and accurate interpreters needed by Russia" (Darnell & Hoem, 1996 p.. 58). He made sure that Native Alaskans were trained to be good navigators and seamen and to teach them crafts, especially carpentry. "Efforts to start the first school, as altruistic as the motives of Gregory Shelikov may or may not have been, were primarily inspired by the need to demonstrate to Catherine II (empress of Russia) and the head of the Church that the

organizers were worthy of being granted a monopoly in the fur trade and to better equip the Native to work for the company" (Darnell & Hoem, 1996).

In 1799, through the formation of the Russian-American Company by an imperial charter from the Russian government, an element of Russian permanence in North America was established. "The company became the dominant force in Alaska for about 68 years and the de facto government in Alaska appointed by the Russian Monarch" (Darnell and Hoem, 1996, p. 59).

The imperial charter also required that the Russian-American company set up schools in connection with its trading activities. Therefore, a primary goal of the Russian-American company was to create education to benefit the company by providing schooling that would support the company's middle management and clerical skills. Students who attended the school were required to remain in the service of the company for a period of fifteen years. Increased costs and diminished income caused some of these companies to close their schools (Cole, 2002, p. 2).

Church schools were established to teach the rudiments of reading, writing, and Christian doctrine at several missions in Alaska, a few of which were located in Native villages. These schools were established alongside company schools. These schools were maintained for the children of the clergy and as a means for preparing priest and lay ministers for the church (Cole, 2002, p. 2).

Throughout the Russian period, one figure stands out as the exception to Russian ruthlessness: Ivan Veniaminov, a Russian priest who lived and worked among the indigenous people for many years during the first half of the nineteenth century. He considered the overall intellectual as well as the spiritual welfare of the indigenous

people as the responsibility of the Church. He developed an Aleut alphabet and compiled a grammar of the Aleut language as well as conducting similar work among the Tlingit (Darnell & Hoem, 1996).

The Russian Church continued to support mission schools in Alaska until 1916, long after the United States purchased Alaska in 1867. "The educational activities of both the Church and the company are difficult to separate since the company supported the Church in monetary terms at the same time opposing the Church's presence in Alaska" (Darnell and Hoem, 1996, p. 60).

Neither the Church nor the Russian-American company made any sufficient attempts to transmit education to the wider indigenous populations. It was not in Russia's interest to provide the indigenous people the means of progressive self-improvement or an interest in a more egalitarian society.

2.2 The Early American Period: 1867-1918

The development of education during the early American presence in Alaska was influenced by three factors: the dominant culture, which defined the objectives and structure of the schooling in general; Presbyterian Church Officials; and the slow implementation of any government policies over the vast and inaccessible land of Alaska. The Russians sold Alaska to the United States on March 30, 1867.

Between 1867 and 1877, Alaska was under the control of the United States Army. During this time, there were no U.S. government programs of any type in Alaska. In the first seventeen years after the United States purchased Alaska, there was no effective form of local government, so there were no provisions for education. Education was left to the American missionaries and the few Russian Orthodox Church schools. A

Presbyterian missionary established the first school in 1877, and by 1884, there were several Presbyterian mission schools along the southeastern coast. There were other missionaries in Alaska during this time, also establishing schools: the Roman Catholics and the Anglicans were at work with the introduction of education in a few villages. Later, the religious sects divided Alaska among themselves to avoid competition and duplicated efforts. With new American settlers came pressure on the U.S. Congress to establish Alaska as a Judicial District of the United States with a restricted civil government, a court system, and the provisions for local government and schools.

With Congress providing schools in Alaska, Reverend Sheldon Jackson was appointed to the position of General Agent of Education in Alaska. From his headquarters in Washington, schools were 4,000 to 6,000 miles away from him and about 100 to 600 miles away from each other. The majority of the students did not speak English, and schools had to be constructed while teachers were being recruited from outside of Alaska, and lack of funds to establish and maintain schools in Alaska proved to have a lasting effect on the state. However, Reverend Jackson was able to persuade federal government officials to ignore the constitutional principle of separation of church and state and to allow his office to subsidize mission schools with government funds. These goals, as promoted by Jackson, advanced the development of schools along religious lines and closely aligned government programs with the aims of the missionary movement.

The policy of stressing distinct Protestant moral attitudes and Western social values and educating indigenous people "out of their home life" (Darnell and Hoem, 1996, p. 64) became as much part of the programs of education as the teaching of basic subject matter. Advertisements placed in newspapers for teachers in the government

schools illustrate this point: "The work being both educational and missionary, applicants will send not only certificates as to their aptness as teachers but also testimonials from their pastor or others as to their Christian activity" (Darnell & Hoem,1996, p.64).

By 1890, the number of schools in Alaska had increased to about fifty-four, of which sixteen appeared to be government controlled schools. Most of the schools were scattered along Alaska's coast, making it difficult or impossible for government officials to visit them, as stipulated in the rules of governing the schools. The practice of subsidizing mission schools was increasingly criticized as more and more people moved into Alaska due to the gold rush, fisheries, and mining. With an increase in economic opportunity, the Secretary of the Interior halted the practice of subsidizing the mission schools.

In Alaska, the government agent for education, Reverend Jackson, was more interested in "civilizing" the Native people, and the white settlers in Alaska also felt that the education being afforded their children was short handed. Pressure from the new residents of Alaska caused Congress to pass new federal legislation that provided for the incorporation of towns and the establishment of school districts for white children within incorporated towns. City schools were specifically established for white children, all but ensuring that Native children would be left to the federal school system, regardless of the law in 1884 that forbade these schools from segregation by race. The 1900 law was strengthened five years later to ensure that white children would have a distinctively different kind of education system. This new law stated:

> That the school specified and provided in the act shall be devoted to the education of white children and children of mixed blood who lead a civilized life. The education of Eskimos and Indians in the District of Alaska shall remain under the direction and control of the federal Secretary to the Interior (Darnell and Hoem, 1996, p. 66).

The social and political context of this kind of education in this period ensured that students in one segment of the population received an education based on the culture of their home, and the other an education alien to the culture of their home.

2.3 Alaska as a Territory of the United States: 1912-1959

In 1905, the government instituted a policy that created a dual system of education, which resulted in white children and children of mixed bloods who were "civilized", going to one school, while Native children went to another school. That same year, the law that instituted the dual system of education failed to provide sufficient local control to meet the demands of a growing non-Native population. Due to this, Congress extended territorial status to Alaska, which gave Alaska some characteristics of a state, but it remained a lesser unit in terms of the political clout carried by full states. In 1917, Congress relinquished its responsibility for education for white children and "civilized" children of mixed blood to the territorial government. Education for the Native population remained with Federal Bureau of Education, a unit of the U.S. Interior Department.

The Alaska Territorial Legislature established a territorial department of education which was to be responsible for schools not under federal jurisdiction. Although rural schools in Alaska were scattered over large areas with large numbers of

Native students, programs of instruction made no provision for local conditions or Native cultures. There was tremendous growth in the number of schools and students enrolled in them during the first two decades of the twentieth century. At the beginning of the Territorial Department of Education, there were forty-six rural, unincorporated communities with territorial schools that enrolled 1,162 pupils and employed fifty-eight teachers. The Bureau of Education had seventy-one rural schools with an enrollment oft 3,500 and a faculty of 133 (Darnell and Hoem, 1996, p. 67).

During this period schools were segregated based on race. Native students were not allowed to attend the same schools as their white counterparts. Following a series of interventions, the Attorney General of the territory of Alaska took up the case in 1943, writing, "Since the question of the right of native children to admittance to the white schools has come up so often in recent years and is again to the fore, it seems proper to deal with the subject at some length, decisively....The question to be answered is: Is the Territory required to furnish school facilities to children of pure native blood: and failing this, must such children be admitted to white schools when demand for admittance is made?"(Darnell and Hoem, 1996, p. 71)

Following a review of the facts of the case and statutes, the Attorney General concluded:

> The objection raised against the admittance of native children into white schools is not fundamentally their color but rather because, it is said, they are not clean, are afflicted with disease or on account of other objectionable practices or habits. Such objections are not a basis for excluding all native children. The school authorities have ample power to exclude from attendance children of any color

> who are afflicted with infectious or contagious disease, or who are living under unsanitary conditions or practice filthy or vicious habits. A clean, wistful native child looks just as sweet in the school room as a white child similarly groomed, and therefore he may not be deprived of an education on account of his color alone. (Darnell and Hoem, 1996, p.72)

This opinion by the Attorney General directed the Territorial Legislature to provide enough facilities in schools for all the youth in Alaska and took the position that Native children are entitled to go to same schools as their white counterparts. Although this opinion helped Natives be admitted into schools of their choice, it did not address the question of curriculum and how to incorporate Native culture into the school curriculum.

2.4 From Statehood to Present

Alaska was granted statehood in January 1959, which made it possible for self-governance at local and state levels. In the 1960s, the school system in rural Alaska was decentralized.

The constitution of Alaska states:

> Section 1. The legislature shall by general law establish and maintain a system of public schools open to all children of the state, and may provide for other public educational institutions. Schools and institutions so established shall be free from sectarian control. No money shall be paid from public funds for the direct benefit of any religious or other private education institutions (Darnell and Hoem, 1996, p. 73).

Right after Alaska became a state, there were calls for the consolidations of the educational system, both federal and state, in order to have consistent education for both

the white population as well as the Native population. During the mid 1960s, there was increasing dissatisfaction with school programs. Stakeholders such as Native leaders and village residents lodged most of the complaints about the welfare of education in rural Alaska.

There was a study being done at the University of Alaska to find alternative systems of education that would be more sensitive to Native educational needs. This study helped create a system of Regional Educational Attendance Areas (REAAs) which divided rural Alaska into twenty-one autonomous schools districts (which has now increased), and each district had its own local school board mandated with the goal of making local policy to improve education (Darnell and Hoem, 1996, p. 75).

Chapter Three

HISTORY OF EDUCATION IN GHANA

3.1 The Colonial Period

Education in Ghana, then called the Gold Coast, was controlled by British rule until 1951. Afterward, it was transferred into Ghanaian hands. Therefore, the year 1951 is a basis (or base line) for education analysis in Ghana. During this period, education in Ghana consisted of about 3,000 institutions with about 312,000 students. The schools in Ghana were unevenly distributed throughout the country and most of them were operated by missionaries. There was no kind of public assistance for the maintenance and upkeep of the schools, and most of the curriculum reflected the Western standards of education in the Gold Coast.

Before the European missionaries established their schools in Ghana, there were schools that had already been established by the European trading companies at their forts and castles along the coast of the country. The Portuguese were the first to establish schools in Ghana, followed by the Dutch after they defeated the Portuguese in the year 1644. The Danes then established their own school to cater to their employees in 1727 at Christiansborg in the present day capital of Ghana, Accra. The English set up a school in 1751 at Cape Coast, which is located to the west of Accra. All of these schools served traders along the coast from the trading companies. Ghanaians were also allowed to attend these schools. Missionary activity in Ghana was limited until the early nineteenth century, a period when there was massive educational expansion due to government and missionary activity.

The British were one of the earliest colonial rulers to establish schools mainly in Cape Coast, followed by the Basel Society missionaries in 1828, the Wesleyan Methodist Missionary Society in 1835, and the Bremen Mission society in 1847.

After a period of time, government involvement in the education system began to wane. The government established and maintained a few schools on its own. At the same time, the government allowed missionaries and individuals to open educational institutions freely. In 1881, there were 139 government and government assisted schools with an enrollment of about 5,000 students.

During the 1950s, the educational system was expanded to include areas in the north of Ghana. Education in these areas was largely left in the hands of the missionaries. The government only gave out aid to the mission schools. Growth in education in Ghana was slow; most schools opened in the early 1940s did not notify or inform the government. Also, the school buildings were in bad shape and with almost no equipment and also untrained teachers. In 1947, upon realizing that some schools in Ghana needed improvement, the central government replaced the untrained staff with trained ones and increased the teachers' salaries through funds from Native Authority taxation. In 1951, there were about sixty-two secondary schools in Ghana, with thirteen of them receiving government aid, leaving the remaining with no assistance. During this period, the number of students completing their basic secondary education and taking their external examinations increased from 179 to 678.

By 1951, it was clear that the northern parts of the country, the area north of the Ashanti region, was lagging behind in terms of educational development. About ninety percent of the students were in the colony, which is the area south the of the Ashanti

region. This area had about fifty percent of the population. Nine percent of the schools were in the Ashanti region, which had about twenty percent of the population, and less than one percent of the schools were in the Northern regions which had about twenty percent of the population.

3.2 1951

There were about 2,500 primary schools in Ghana with an enrollment of approximately 234,000 students that offered part of a six-year primary course and 500 middle schools with an enrollment of about 66,000 students that offered part or the four-year course of general education.

The Education Department's report for 1949-50 stated:

> The senior primary course had been established in the Gold Coast for at least 50 years, the original purpose being, apparently, to provide a post basic or secondary course relevant to the country's needs and at the highest standard feasible at the time. The course has long been the central feature of the educational structure. Although it is probable that the original intention was much broader, the course has come to be regarded by parents and pupils mainly as a preparation for clerical and other wage or salary earning employment of "black-coated" types, entered immediately after the boy or girl leaves school or after some form of vocational training. (George, 1974, p. 30)

In the early years of the educational system in Ghana, the British used local languages in schools, but they were later replaced by the English language as the official language. The Gold Coast had about sixty secondary schools and enrolled about 6,900

students in 1951. Most of the schools, including the ones assisted by the government, selected their students through Common Entrance Examinations from among students in the eighth, ninth and tenth grade of their elementary education.

3.3 1952-1959

In 1952, tuition fees were abolished in all public primary schools, and parents were to provide uniforms, textbooks and school materials. Most of the unassisted primary schools were brought into the public system with large numbers of untrained teachers brought in to assist and help the trained teachers. The government also used any and all structures that were available to provide education for the population, which brought enrollment to about 130,000 in grade one. Enrollment in the primary schools rose from 154,000 in 1951 to about 335,000 in 1952, and middle school enrollment rose from 66,000 in 1951 to about 116,000 in 1957.

Teachers graduating from the teacher training college increased from 700 in 1951 to about 1,600 during the period of 1955 to 1957. Secondary school enrollment jumped from about forty-three percent to about seventy-two percent of school-aged children. Also, university enrollment increased to about 1,100 students by 1959.

The central government decided to implemented a seven-year development plan which focused on higher educational institutions turning out more elementary schools teachers. It called for increasing the enrollment of these teacher training colleges, thereby replacing the untrained teachers in the classrooms with trained teachers (George, 1974, p. 46).

3.4 1960-1966

On November 15, 1961 the Education Act was introduced. It provided free compulsory education to students in primary and middle school for a length of time to be determined by the Minister of Education. Although it was a great idea, facilities to cater to the vast number of students were still lacking and the government did not fathom the number of students in the country at the time. The government introduced a shift system for schools where facilities were lacking to cater to the extra students. By 1960-61, over a million students were attending public primary schools with about 267,000 attending middle school, and the central government had to rely heavily on untrained teachers to see to it that plans for a free and compulsory education were achieved in Ghana.

As the number of students in the schools increased, the number of trained teachers was not able to keep pace with the number of new schools that were being opened. Also, the time it required to train teachers took much longer than the government had anticipated. Yet, the government went ahead with their plans to increase enrollment in the primary and middle schools. The central government stated: "With the implementation of the fee free and compulsory education and the scheme of free supply of textbooks and school materials, the total number of primary schools has increased out of all proportion to the output of trained teachers" (George, 1974, p. 50).

By the end of 1966, the public school system in Ghana had achieved tremendous growth through the absorption of private schools and by building new schools.

Table 3.1 Enrollment

Number of Students in schools:

	1951	**1965-66**
Primary	154,360	1,137,495
Middle	66,175	267,434
Secondary	2,937	42,111
Technical	622	4,956
Teacher Training	1,916	15,144
University	208	4,267

During the1965-66, school year, enrollment in university had gone up 20 times and secondary enrollment had gone up fourteen times. Education had become tuition-free for every level of the public school system. The central government provided free textbooks for every student in primary, middle, and secondary schools. However, the problem of untrained teachers still remained. The central government relied heavily on untrained teachers, who made up sixty percent of the teaching force, as well as expatriate teachers, which the schools relied heavily on. Compounding this problem was the fact that students were leaving middle school with the assumption that they could find jobs, thus putting a strain on the economy. For all the gains in education, the expenditures of the central government spiraled out of control. By the end of 1965, expenditures on education totaled 67 million cedi, fourteen times what was spent 1951. This amount constituted a quarter of the whole country's operating budget.

In 1966, the government in Ghana was overthrown and replaced by an army-police administration. This new government instituted a comprehensive study of the

education system to correct its out-of-control budget. It gave some of the responsibilities of education back to the parents. Much of the budget was allocated to education, so the government decided to slow the growth and expansion of the education system at every level. The government developed a two-year plan in which it stated:

> There would be less cause for concern over these trends if the programs concerned had been well planned and coordinated. As a result Ghanaians are now paying the price of educational expansion undertaken before trained teachers were available in sufficient numbers (George, 1974, p. 54).

The central government concluded that education had suffered. The government felt that secondary education should be given a higher priority through expansion. This was achieved by consolidating and improving the quality of primary education, and controlling the growth of the university education to relate more directly to development needs (George, 1974, p. 55). The central government also decided that there was to be a gradual increase in secondary school enrollment.

The government also planned to phase out untrained teachers with trained ones by consolidating the teacher training school systems. This was to be done by reducing the number of teacher training colleges and build on the few good ones. Elementary and primary schools would be consolidated and improved. The central government also introduced courses for students in the ninth and tenth grades that would allow those who could not go on to secondary school the opportunity to learn a trade. Secondary school curriculum was also to be diversified to provide subjects such as commerce, agriculture, domestic science, metal work, wood work, and technical drawing. The central government also identified problems within the educational system that needed to be

fixed such as the administration, planning, and coordination of the whole educational system.

3.5 1980-Present

During this later period of education, students have to complete six years of basic primary education and take an entrance exam to get into high school, where students have to spend six years in total, then must take their mid-high school exams which they must pass in order to qualify to go on with high school for three more years and then pass their final exams before going on to the university level.

Primary and junior secondary school education is tuition-free and mandatory. The government of Ghana's support for basic education is unequivocal. Article 39 of the constitution mandates the major tenets of the free, compulsory, universal basic education (FCUBE) initiative. Launched in 1996, it is one of the most ambitious pre-tertiary education programs in West Africa. Since the early 1980s, the Government of Ghana's expenditures on education have risen from 1.5% to over 5% of its GDP. Since 1987, the share of basic education in total education spending has averaged around 67%.

The units of the Ministry of Education, Youth, and Sports (MOEYS) responsible for education are: the Ghana Education Service (GES), which administers pre-university education; the National Council on Tertiary Education; the National Accreditation Board; and the National Board for Professional and Technician Examinations (NABPTEX). The West African Examinations Council (WAEC), a consortium of five Anglophone West African Countries (Ghana, Nigeria, Sierra Leone, Gambia, and Liberia) is responsible for developing, administering, and grading graduation examinations at the secondary level. In 2002 there were approximately 3.7 million students attending schools at these three

levels: 70% at the primary level, 24% at the junior secondary level and 6% at the senior secondary level.

There are over five hundred public senior secondary schools in Ghana that graduated a total of 90,000 students in 2004, representing a huge expansion over the old system (which was transformed in 1987), which consisted of three hundred institutions graduating 27,000 students a year. However, access to each successive level of education remains severely limited by lack of facilities. Only about 30% of junior secondary school graduates are able to gain admission to senior secondary schools, and only about 35% of senior secondary school graduates are able to gain admission to universities and polytechnics, with only 10-20% going on to diploma-level postsecondary education. Private secondary schools play a very small role in Ghana, graduating about 200 students per year.

In 2004, the Ghana Poverty Reduction Strategy was formulated to focus on two areas of education:

- Enhancing access to basic education, with special emphasis on gender and geographical equity.
- Improving the quality of education.

Since this policy shift by the central government, there has been significant progress registered with access to basic education. To enhance access to education the central government has started to implement specific policy measures;

- Rehabilitation and construction of basic school classrooms
- Expand teacher retention schemes

- Ensuring the timely delivery of core textbooks for primary schools, particularly in the most deprived areas.

The education sector continues to be confronted with a number of policy issues that remain to be addressed. This includes the persistent geographical and gender disparities in access to education; and less than satisfactory quality education (National Development Planning Commission, 2005, p. 113-116).

Education reforms have sought to encourage the idea and development of "community based" schools. This has made education accessible to many students. In 1994, the Ministry of education appointed the Education Reform Review Committee (ERRC) to examine the education program in the country and to suggest changes. The ERRC suggested that there was crowding of the curriculum at the secondary school level and this was contributing to the poor performance of students. Also as part of the reforms currently taking place in the education sector, the government has designed specific schools districts and regions as Science Resource Centers. The goal is to equip schools with the logistical, material and physical support and resources to enable them function as centers for science education. The idea is for students from other school districts to use these centers for their science education (Dei, 2004, p. 55-58).

Chapter Four

EDUCATIONAL FUNDING IN ALASKA

There are three components of Public School Funding in Alaska:

- State Aid
- Required Local Contribution
- Title VIII Impact Aid

State Aid Entitlement is the basic needs of all schools in Alaska minus a required local contribution minus ninety percent eligible Federal Impact Aid plus the amount of Funding 'Floor' plus Quality School Grants equal State Aid Entitlement.

Required Local Contribution is the equivalent of a four mill tax levy on the Full and True Value of the taxable real and personal property in the district not to exceed forty-five percent of the district's Basic Need for the preceding fiscal year. Beginning in fiscal year 2002, only fifty percent of the increase in real and personal property over the 1999 Full and True Value is used for the four mill equivalent calculation. If the latest Full and True Value doesn't exceed the 199 Full and True Value, then the latest value is utilized.

Title VIII Impact Aid is Federal Impact Aid which provides funds to school districts for children of parents living and/or working on federal property "in-lieu of local tax revenues." Ninety percent of the eligible funds are used in the calculation of state aid (State of Alaska, 2007).

For the funding formula to work the state has to take into account:

- **School Size Adjustment**

    1. For each school in the district subtract from the Average Daily Membership (ADM) all correspondence counts. Adjust the remaining ADM of each school using the school size factor table.

Table 4.1 Funding Formula

Reference:	School Size:	Formula:
1.	10-19.99	39.60
2.	20-29.99	39.60 + (1.62 * (ADM - 20))
3.	30-74.99	55.80 + (1.49 * (ADM - 30))
4.	75-149.99	122.85 + (1.27 * (ADM - 75))
5.	150-249.99	218.10 + (1.08 * (ADM - 150))
6.	250-399.99	326.10 + (.97 * (ADM - 250))
7.	400-749.99	471.60 + (.92 * (ADM - 400))
8.	Over 750	793.60 + (.84 * (ADM - 750))

- **District Cost Factors**

    1. Cost factors are specific to each school district
    2. District cost factors range from 1.000 to 1.736
    3. The legislature monitors the district cost factors and submits a report to the legislature on January 15 every other year, beginning fiscal year 2001.

- **Special Needs Funding**

    School districts must file a plan with the department of education indicating the special needs services that will be provided, Section 14.17.420(2)(b), to qualify for special needs funding.

- **Intensive Services Funding**

  School districts receive funding for intensive special education students that:

  1. Are receiving intensive services
  2. Are enrolled on the last day of the 20 school day count period
  3. Have an established Individual Education Plan (IEP)
  4. The district intensive student count is multiplied by five.

- **Correspondence Programs**

  Funding for correspondence programs is calculated by multiplying the correspondence ADM by eighty percent.

- **Basic Need**

  Multiply the district final adjusted ADM by the Base Student Allocation to determine Basic Need. The base student allocation is $5,380.

Additional funds are provided above the basic needs of school districts:

- Maximum Local Contribution – this is if the City or Borough would like to contribute more than the required then the maximum local contribution applies. To calculate this use the Required Local Contribution plus twenty-three percent of Basic Need or a two mill equivalent of the Full and True Value of the taxable and real property within the district, whichever is greater. The additional amount is added to the Required Local Effort to reach the Maximum Local Contribution.

Example:

- Nome: 23% of Basic Need = $1,920,853 or
- .002 of Full and True Value = $505,451

Result:

- Required Local Effort: $889,303

  Additional Local Contribution +$1,920,853*[23% of Basic Need]*

  Maximum Local Contribution $2,810,156

Adjustments to the Funding 'Floor'

The funding 'Floor' was established as a bridge between the new funding formula implemented in fiscal year 1999 and the old formula that was in place in fiscal year 1998.

Example:

Old Formula $1,900,000 State Entitlement

New Formula $1,800,000 State Entitlement

Difference $ 100,000 Supplemental 'Floor'

All adjustments made to the 'Floor' are reductions. The adjustments will continue until the 'Floor' reaches a balance of zero. There two ways that the 'Floor can be adjusted:

- If the Basic Need in the current fiscal year is greater than the Basic Need in the prior fiscal year, then take the difference and multiply it by forty percent. Subtract this number from the funding 'Floor' to get the new 'Floor' amount for the current fiscal year.
- If the ADM decreases by five percent or more over fiscal year 1999, then reduce the funding 'Floor' by that same percentage.

Note: No action is take on the funding 'Floor' if"

- The current fiscal year Basic Need is less than the prior year Basic Need
- The ADM has not decreased by five percent or more since fiscal year 1999.

Quality School Grants – this is the districts adjusted ADM multiplied by sixteen dollars generating the amount the school district is eligible to receive (State of Alaska, 2007).

4.1 Example: *Nome School District*

I. Basic Need Calculation			**Column**
Projected ADM		804.00	L
Determining School Size Adjustment			
[Utilizing Table from page 4]	ADM		
Nome Elementary School	400	*[Anvil (Alt.) School is adjusted*	
Anvil City Science Academy	+ 44	*with Greatest ADM see pg. 3]*	
	= 444	471.60+(.92x(**444**-400)) = 512.08	
Nome/Beltz Jr. & Senior High =	**340**	326.10+(.97x(**340**-250)) = 413.40	
Nome Youth Facility =	**14**	**14** = 39.60	
		School Size Adjusted ADM	**965.08**
Adjusted ADM-School Size		965.08	O
Apply District Cost Factor		x 1.319	
		1,272.94	Q
Apply Special Needs Factor		x 1.20	
		1,527.53	R
Add Intensive Service Counts		20.00	T
(4 x 5) = 20.00		1,547.53	U
Add Correspondence Counts		4.80	V
(6 * .80) = 4.80			
District Adjusted ADM		1,552.33	W
Multiply by $5,380 base allocation		x $5,380.00	
Basic Need:		**$8,351,535**	**B**
II. Nome's State Aid			
Basic Need		$8,351,535	B
Required Local Contribution		(889,303)	C
Impact Aid		(35,984)	F
State Aid		$7,426,248	G
III. Quality Schools Grant			
District adjusted ADM **x** $16		1,552.33	
		x $16.00	

	$24,837	I
State Aid	$7,426,248	G
FY2008 Adjusted 'Floor'	0	H
Quality Schools Grant	24,837	I
Total State Aid Entitlement	**$7,451,085**	J

The foundation program for Alaska provides each school district with enough funds to meet their basic educational funding needs if other sources of funding are not sufficient. Basic educational need is the dollar amount which the state determines is sufficient to provide the child of school going age in Alaska with acceptable educational services wherever they may live in the state. Educational equity means that each school district receives enough units per pupil, given the size of its schools and its programs, and that its level of funding is adjusted adequately to reflect a geographic cost differential relative to Anchorage (State of Alaska, 2005).

Chapter Five

EDUCATIONAL FUNDING IN GHANA

Education in Ghana is funded from public resources even though the private sector is playing an important role. Public sources of funding include:

- The Ghana Education Trust Fund (GETFund)
- The District Assembly Common Fund (DACF)
- The Ministry of Education, Youth, and Sports (MOEYS)
- The Student Loan Scheme
- The Scholarship Secretariat

The first two are part of the statutory expenditure and the other three are derived from the discretionary budget. The Ghana education trust fund consumes about 2.5 percent of the Value Added Tax (VAT) collections.

The MOEYS has a budget allocation of about 23.2 percent of total domestic revenues, the GETFund represents about 0.81 percent of Gross Domestic Product (GDP) which is the total of goods and services produced in the country, the district assembly common fund makes up about 1.0 percent of domestic revenues with the scholarship secretariat contributing about 0.33 percent of domestic revenues to education. Total domestic public spending on education is about 6.23 percent of GDP on education (African Development Bank, 2006, p. 19).

Total recurrent spending on education was GHC 2,569,550 million (5.4% of GDP) in 2002 and projected to increase to GHC 3,277,635 million (5.9% of GDP) in 2005 through 2008. Total expenditures (table 2.4) shown from 2002 to 2005 reflect the average annual share of the budget allocated to each level of education. It shows an

increase in every level except for the non-formal sectors, vocational, technical, and other expenditures (including management, sub-vented agencies, and capacity building). The highest average annual increase is focused on primary education

Table 5.1Total Expenditures by Level of Education (GHC Million)

Detail/Year	2002	2003 Estimate	2004 Estimate	2005 Estimate	Average Annual Increase	Average Annual Increase %
Preschool	170,622	194,688	199,686	205,409	11,596	3.19
Primary	1,052,297	1,385,879	1,548,603	1,614,946	187,550	51.59
Non-formal Education	101,112	37,748	39,635	41,617	-19,832	-5.46
Special education	11,826	15,453	21,642	24,567	4,247	1.17
Junior secondary education	689,480	785,392	845,951	874,144	61,555	16.93
Senior secondary education	413,409	505,602	551,788	574,634	53,742	14.78
Technical and Vocational Education and Training	59,371	64,637	48,561	53,317	-2,018	-0.56
Teacher training	99,724	108,435	111,622	117,104	5,793	1.59
Tertiary education	381,975	445,885	458,532	477,872	31,966	8.79
Other (Management, subvented Agencies, Capacity Building etc)	27,475	75,59	25,852	22,239	-1,745	-0.48
HIV/AIDS Management	0	1,000	1,000	1,000	333	0.09
Total	2,916,292	3,551,668	3,852,873	4,006,846	363518	100

Source: African Development Bank, 2002

Recurrent expenditure is forecasted to increase in all subcomponents of the school level from 2003 to 2008. The highest allocation is targeted to go to the primary education (49.8 percent), followed by the junior secondary education (30.8 percent) and senior secondary

education (19.4 percent). Most of the expenditure goes into teacher and administrative salaries.

Table 5.2: Unit Recurrent Spending (in Public Institutions) by Level of Education for the fiscal year 2002

Level	Total Recurrent Spending (Million Cedis)	No. Of Students	Unit Cost (Cedis)	Unit Cost as % of GDP per capita
Preschool	162,141	457,975	354,039	14.4
Primary	892,738	2,586,434	345,162	14.0
JSS	612,238	865,636	707,263	28.7
SSS	383,152	220,000	1,741,600	70.7
Tertiary	358,624	60,000	5,977,067	243

Source: African Development Bank, 2002.

The table above shows unit costs of each level of education in relation to the GDP and confirms that units cost increase with level of education. The highest unit cost is that of tertiary education (243 percent of GDP per capita), primary education (14 percent of GDP per capita), and senior secondary education (70.7 percent of GDP per capita). This is due to the smaller number of student in higher levels of education and the high cost of education at those levels (African Development Bank, 2002).

In addition to domestic resources, external resources from the donor community play an important role in the development of education in the country. Partners include World Bank, USAID, DfID, UNICEF, UNDP, JICA, CIDA and DANIDA. Table 5.3 shows the distribution of donor funding from 1996 to 1999. Six of the interventions went to support basic education, of which 2 went to teacher education, 1 to vocational training, and 1 to Non-formal education. There was no intervention that targeted senior secondary

schools during this period. The last one was in 1991 being 15 million USD by the World Bank (IDA) for the Community Secondary School Project.

Table 5.3: Distribution of External Funding to Ghana's Education 1996-2003

Year	Programme/Project	Amount (million)	External Agency	Nature of Assistance	Beneficiary sub-sector	Period
1996	Basic Education Sector Improvement Project	US$ 50	World Bank (IDA)	Loan	Basic Education	1997-2001
1996	Primary Education Rehabilitation Project	UA12	African Developm ent Bank	Loan	Basic Education	1996-2003
1997	Basic Education Sector Improvement Project	GPP 50	DFID, UK	Grant	Basic Education	1997-2001
1997	Basic Education Sector Improvement Project	US$ 53	USAID	Grant	Basic Education	1997-2001
1997	Basic Education Sector Improvement Project	DM 35	Germany (KfW)	Grant	Teacher Education	1997-2000
1999	Basic Education Sector Improvement Project	DM 6	Germany (GTZ)	Grant	Teacher Education	1997-2000

Table 5.3 (Continued)

1999	Technical & Vocational Education Project	US$ 7.3	Canada CIDA	Grant		1999-2004
1999	Literacy and Functional Skills Project II	US$ 34	World Bank (IDA)	Loan	Non-Formal Education	1999-2004
2003	Education Sector Project*	US$ 60	World Bank (IDA)	Loan	Sector Capacity Building, Basic and Tertiary Education	2004-2008

Source: African Development Bank, 2002.

The World Bank is currently finalizing the development of the 60 million USD Education Sector Project (EdSep). The project has three components namely: sector capacity building, pilot programmatic scheme, and tertiary education innovation. The first component adopts a holistic approach to strengthening the capacity of the Ministry and its agencies. The second component aims to improving access to, and quality of, basic education while providing the Ministry an opportunity to experiment with the programmatic, sector-wide approach, which is likely to become the main approach to be used by most sectors in the near future. The tertiary education innovation aims to make tertiary education more responsive and relevant by supporting polytechnics, the University of Development Studies and post-graduate programs. The World Bank's intervention has been designed in close collaboration with this project so as to avoid duplication and maximize complementarities between the two projects (African Development Bank, 2006, p. 21).

Chapter Six

EQUITY AND ADEQUACY ISSUES

Equity is measured in terms of the variations in per pupil revenues among school districts in a single state. By this measure, some states have greater funding equity than others, and in most states wealthy districts have significantly higher per pupil expenditures than do poor districts. Equity is also greater in those states where the state's share of the education budget is higher and where the state consistently targets its contributions to lower income districts (Augenblick, Myers and Anderson, 1997, p. 63).

Adequacy is defined as having sufficient level of funding to deliver an adequate education to every student in the state. Most states or countries like Alaska and Ghana have not explicitly addressed the questions of how much education is adequate or how educational standards can be converted to a finance formula (Augenblick, Myers and Anderson, 1997, p. 63).

The constitution of Alaska states: "the legislature by general law shall establish and maintain a system of public schools open to all children of the state". This means that the free, adequate, and equal education of each child in Alaska and the funding of that education is the responsibility of the state of Alaska (First amendment complaint, 2004, p. 6).

6.1 Equity

The concerns for equity in education are based on the fact that most citizens in these two areas aspire for an education that is efficient, fair, and just for all. An important aspect of school finance has been the attempt to diminish the disparities in expenditures

per pupil by seeking to equalize the fiscal capacities among parents or school districts (McMahon & Geske, 1982).

There are three distinct types of equity issues in education: the lack of fiscal neutrality, differences in student educational needs, and differences in educational costs and prices. Most advanced countries such as the United States recognize the importance education plays in the stabilization of countries in political and economic terms. Although education serves the population well, there still exist inequitable traits in the funding and financing of education in Alaska as well as Ghana.

There is always disagreement in the public forum about how best to provide a fair and just educational system for all. Some school districts have more fiscal resources than other schools while other variation in the funding of education seems to aggravate the problems of trying to treat all children and fund all schools equally.

The concepts of equity and adequacy in education are difficult to measure and to implement when every state must factor the needs of a large number of schools districts, which usually vary considerably in their student characteristics and needs such as:

- Compensatory or Special Education
- Teacher salary schedules and benefits
- Building and land acquisition costs
- Ability and willingness to raise local tax revenues
- Local preferences for educational services

Kant as cited (in Moris 1971,p. 243) relates equity to right, saying that equity is founded not on any principle of beneficence, benevolence, or charity, but upon "right." To him an innate right is vested in every person at birth, a birthright, while acquired rights are founded upon juridical acts. For Kant, this innate right is the obligation which equity must address (Alexander and Forbis, 1976 p. 195-205).

Equity and justice are interchangeable and therefore to the jurist equity is a concept of justice while the economist views equity as part of an a priori condition of which justice is part.

According to Alexander there are eight equity models to be followed:

- Adequate funding of basic developmental educational programs in such a way as to establish thorough, efficient, and uniform educational opportunity throughout the state.
- A basic formula adjustment which will fully fiscally equalize among all school districts in the state. This is probably the most important single element in the determination of equity, but it cannot stand alone if true equity is to be achieved.
- A level of fiscal effort for uniformity at such a high level as to prevent a child's education from being a function of low educational aspiration of the community, or to prevent external local political influences, unresponsive to or unconcerned with education, from denying appropriate educational opportunity.
- Financing for corrective educational programs designed to meet particular and individual needs of children which are, due to congenital deficiencies, adversely

affecting educational achievement. Such programs must not establish unreasonable or legally irrational classifications of children.

- Financing for remedial educational programs designed to provide measures to offset educational disadvantage caused by social or economic distortions. Such financing may be justified as offsetting individual deficiencies of the least advantaged.
- Financing for economies of scale created by geographic and demographic conditions.
- Financing for governmental overburdens which tend to drain local tax resources on which the local school district must rely.
- Financing which is designed to correct for differences in the cost of delivering comparable educational services throughout a state. This should go beyond a simple adjustment for cost of living as determined in an economic market; rather it is to correct for disparities in the school district power to purchase educational services.

Under Alexander's proposition, fiscal equalization among school districts is very important in an equitable system, but it is insufficient. Other complex financial factors have to be considered. The government of Ghana introduced a capitation grant which will enable every child of school age in Ghana to enjoy free basic education, to enforce equity in the provision of education by helping retain children already in the school system, and also give aid to children who do not have access to quality education in the country.

Equity issues are very important in Alaska as well as in Ghana. In Alaska emphasis tends to be placed on schools in the big cities such as Anchorage, Fairbanks, and Juneau, whereas villages often tend to lack enough resources to provide an education system that is comparable to those in the cities. There is also a lack of teachers who want to go the villages, because of the lack of infrastructure and reward for going to such areas, as well as the lack of adequate infrastructure that will aid in the process of education in the rural areas of Alaska. In one sense Alaska and Ghana face similar issues when it comes to having an educational system that is equitable to both rural communities and urban communities.

Spending on K-12 education in Alaska and Ghana are beset with disparity issues that are reflected in the property wealth and tax rates. Early school finance work focused on the resources available to children (inputs), although the author of this work implicitly assumed that equalizing resources would also equalize performance and life outcomes. We now know that the linkages between inputs and outputs are complicated. While a common statement among experts in education is that changing resource allocation can lead to improvements in outputs if schools use their funds productively, the enormous amount of literature on education production functions is not conclusive about which specific resources, under which particular circumstances, will affect outputs and outcomes (Hanushek, 1986; Ferguson & Ladd, 1996).

To achieve an educational reform that is fair to all stakeholders, we must focus our attention on the whole education system. This will help with higher standards and students meeting or exceeding those standards set by their schools. Such reform must also

respond to the challenge of improving schools and other educational institutions so students from diverse groups will have equal opportunity for educational success, economic self-sufficiency, and community responsibility. Profound inequities create barriers to educational excellence for many students in schools across the United States (Hammond, 1996). One in four students does not complete high school (Council of Chief State School Officers, 1987). This disturbing trend of school failure is further reflected in lower average achievement scores, higher teen pregnancy and expulsion rates, and widely documented incidences of gender bias and harassment in classrooms (American Association of University Women, 1992; National Coalition of Educational Equity Advocates, 1994). In addition, schools with large concentrations of minority and low income students are often funded inequitably and staffed by teachers who are least likely to possess the skills needed to work successfully with diverse students (Hammond, 1996).

Clearly, school improvement efforts can no longer ignore the issue of equity. School improvement must focus not only on what students should know and be able to do, but on the fair and equal success of a diverse student population (Hammond & Sclan, 1996). Equitable educational systems foster the maximum development of individual potential. A commitment to equity ensures that all students develop the knowledge and skills needed to participate effectively in community life as workers, citizens, parents, leaders, and role models for future generations. To assure educational excellence for all students, schools must address the diversity that students bring to the learning environment and organize schools and classrooms to support the academic achievement and success of all students (Hammond and Sclan, 1996).

The National Alliance for Partnership in Equity has listed some ways of addressing the equity issue:

- Educational leaders assuring equity through governance.
- An educational leader or administrator ensuring that equity is a part of the everyday school life.
- School personnel, especially those from underrepresented groups, have the opportunity to influence formal and informal decision-making at all levels.
- All school committees contain members who are knowledgeable about equity issues and are representative of the diversity of the educational community.
- Leadership roles (e.g., department chairs and chairs of special committees) reflect the gender and ethnic make-up of the educational community.

The issue of equity in education is also important for the success of the education systems in Ghana and Alaska. Equity in education means making sure that the funding of education is evenly distributed so that it includes every child, parent and teacher in the process of education and makes sure that every student's need is met. Equity in education makes sure that education is available for all without prejudice and that local environment and activities are incorporated into the educational system to make it appealing to the stakeholders involved in the education process.

Recognizing the limitations inherent in school finance models based entirely or predominantly on local taxation, It was recommended that general state aid be used to facilitate movement toward greater educational equity (McMahon & Geske, 1982). Noting that most individuals would insist on the provision of at least minimal educational programs in all school districts and would not preclude individual school districts from going beyond that minimum at their own expense, Strayer and Haig (1923) recommended that the concept of education equity and equalization of school support be operationalized by furnishing all children within the state with equal educational opportunities up to a prescribed minimum, and raising the funds necessary for this purpose through state and local taxation adjusted so that taxpayers in all districts pay at the same rates in relation to local fiscal capacity. This can, however, be a burden in a place like Alaska where the indigenous population does not necessarily pay taxes. It also creates the problem of having affluent communities raise funds which will bring a higher quality of education to these affluent communities by attracting better teachers through paying higher salaries and providing services that generally enrich the education programs in these districts.

6.2 Adequacy

Issues of adequacy have always plagued education and finding a way to deal with it is necessary for the betterment of the educational system both in Alaska as well as in Ghana. The year Kentucky Supreme Court decision in *Rose vs. Council for Better Education* served as the beginning of the modern adequacy movement. In finding the entire state education system unconstitutional, the Kentucky Supreme Court not only set

the education goals that the system should strive toward, but also demanded that the legislature provide enough funding for students to be able to meet these goals. If there was a direct relationship between increases in education funding and increases in meeting education goals, determining adequate levels of funding would be relatively simple. Unfortunately, research is inconclusive on the relationship between funding and achievement. On the other hand, many people argue that funding must play some factor and that any discussion over adequacy must consider funding levels.

Currently there are three models to be followed concerning adequacy issues in education:

- The professional judgment model;
- The advanced statistical model;
- The successful school model.

In order to effectively use these three models it is important to establish a base level for adequately funding schools; this level would be the amount of funding needed to adequately finance a school with average student characteristics. The next level would be to make adjustments for the different proportions of students.

The professional judgment approach represents one of the first attempts to link adequacy to a dollar amount. It was devised to make district cost adjustments. This model uses the recommendations from a panel of experts to define the necessary components of an adequate education (Chambers and Parrish, 1994). The expert panel could include teachers, administrators, policy makers and parents. This group will decide what is

needed in terms of equipment, staff, programs and other things to meet educational standards set by the state. This group of experts can also make recommendations for handling students with special needs and identifying the resources needed to help these students. Despite the effectiveness of this approach there are some problems that need to addressed, with the main problem resulting from possible inconsistencies arising between different expert panels (Duncombe & Yinger, 1999). Currently this problem is being addressed at the school level by incorporating different levels of reviews into this process.

The advanced statistical model is one of the most complex systems to address the issue of adequacy in the school system. It uses educational data, student characteristics coupled with statistical techniques to isolate the effects of different types of inputs and arrive at a base cost of adequate education (Duncombe et al, 1996). This model can use student characteristics, environmental factors and other variables of a locality that affect cost to address issues of adequacy for a particular school. In one study conducted using the advanced statistical model, researchers attempted to determine the cost of achieving certain performance outcomes in schools with different demographics and other characteristics. The study started by establishing a hypothetical school district based on average statewide characteristics. The hypothetical district then was compared to the characteristics of individual schools to determine the cost of providing different levels of education in different areas. Accordingly, costs are adjusted above or below the hypothetical district in relation to the characteristics of the individual district or school.

The main strength of this model is that it is better suited to make adjustments in school and student characteristics. The advanced statistical model draws conclusions about the differences in costs associated with special populations to arrive at a base level of funding. Adjusting for special populations, the model identifies costs to a specific school that has certain proportions of special populations. This results in the ability to accurately estimate the differences in resources needed between varying educational settings. With increasingly comprehensive data being collected in educational settings and with more refined statistical techniques, it will be possible to define an accurate measure of the cost of educational adequacy. The main critique of the advanced statistical model is that the advanced techniques are simply not understandable to the average lawmaker.

The successful schools model considers all schools and districts in the state, and then checks which ones are meeting state standards and treats the amount being spent by these schools as an adequate funding level. "The underlying assumption is that any district should be able to accomplish what some districts do accomplish" (Augenblick, 1997). One criticism of the successful schools model is that it bases its recommendations on a finite set of performance characteristics and does not account for the full scope of educational outcomes. Another problem with the method is that the proficiency data employed does not account for differences in student characteristics (Guthrie and Rothstein, 1999). For example, the approach assumes that schools or districts with very high percentages of at-risk students can, using the same level of basic resources, perform at the same level as schools with low proportions of at-risk students. At-risk students are

students who can easily drop out of school or students who have a high likelihood of dropping out of school. This is a potentially more significant problem than the first, since there are serious difficulties associated with controlling for such characteristics.

All models designed to address issues of adequacy have some form of difficulty due to the fact that one cannot account for student, teacher and school characteristics and geographic differences. As determined above, schools in Ghana and Alaska will continue to grapple with issues concerning adequacy in their educational and school systems; meanwhile research will continue to fine tune progress that is being made to benefit students. Although issues of adequacy are being addressed in Ghana or Alaska, more needs to be done to ensure fair and adequate funding for all schools and every district that needs help.

Chapter Seven

Conclusion

Educational funding in Alaska and Ghana face similar problems and issues. Alaska's issues have to do with having a fair distribution of its resources to impact educational funding in the remotest parts of the state, and also to make sure that funding is both equitable and adequate for all, and not only big cities, but every school and school district. In Ghana, more needs to be done in terms of funding. The government can begin to decentralize the educational system to give it a jumpstart until the government can better control it. Also, allowing local districts to have more control over their education will have the community become stakeholders in the carriage of education in their districts. Issues of adequacy abound in Ghana. There needs to be an educational system where funding for schools will be adequate and equitable for all, including both urban and rural areas of the country. Quality of education has to be looked at carefully and increasing teacher training and parent participation in the educational process might be good for educational development. There needs to be

- An introduction of good governance in the way the educational process works in Ghana.
- Improved accountability which will benefit administrators, teachers, and parents.

Equitable and adequate education both in Alaska and Ghana depend on several factors. The most obvious factor is money. Performance-based budgeting is not a good option for rural schools, because the rural schools will not be able to keep up until they are on a level playing field with more urban schools.

The second important issue is infrastructure. Rural schools need to attract qualified teachers. This can be done by providing programs that help the teachers pay off student loans, and by providing financial incentives and better accommodation for the teachers, and also by providing them with the necessary tools. Many teachers in rural Alaska, for example, do not have good housing situations. They also often do not have adequate supplies on time.

Thirdly, the community needs to feel like they are stakeholders in the education process in Alaska as well as in Ghana. If community members feel like they own the process of education, they will be much more involved and supportive of the school. One way to do this is to involve the community in the decision-making.

Rural schools need to incorporate cultural aspects of the region into the curriculum. For example, currently, most education is provided from a Western perspective, but there needs to be an effort made to make education fun and applicable to the student's current situation. Many Alaska Native tribes are very interested in the environment, so field trips or hunting trips might be a good way to incorporate the local culture with learning. Also, using Native ways of knowing to solve problems, instead of insisting on Western ways of thinking would be helpful. Students might like to think about why their tribes migrate in certain months and look behind the Native traditions for

knowledge and understanding of the world. Adding their heritage to the curriculum will increase the quality of education.

In Ghana, education has traditionally been from a British perspective. In other for the educational process to succeed in Ghana, there needs to be an education plan where the local people feel included in the educational process; they should be part of the decision making process in education and not simply be handed decisions made by the government. Individual school districts need to be taken into account when trying to achieve equity and adequacy in rural schools. For educational funding to succeed in Alaska, several things need to happen:

- There is the need for the improvement of facilities at schools;
- Training of teachers should be of paramount importance;
- Statewide curriculum improvement to meet national education requirements;
- Development of programs for students who lag behind in the classroom to bring standards up to par with other school districts in the country;
- There is also the need for money and funding to be increased in the state to improve priority programs such music, math, and science education for students.

For Ghana to have an effective educational system it needs:

- For the central government to decentralize the educational system in the country;
- Emphasis on math, science, reading and writing courses that will improve student competency in schools;
- Additional funding to be set aside for rural schools to help bring them up to standards with urban schools;

- Curriculum development to be improved and creative ways of teaching to be encouraged.
- Implement a funding formula that is fair to all schools, regardless of where they are located in the country;
- A requirement all teachers to have at least a bachelors level of education and teacher certifications with standards on par with other world class educational standards;

The government must work to have all sectors of the economy helping and promoting education as well as ensuring that all districts in the country receive equal and fair funding for their schools. All stakeholders involved in the funding of education need to have a say in how education is funded in Ghana as well as make sure that they are involved in the decision-making process of the funding of education. This way they know they have more of a say in the educational process and will therefore will be willing to participate in order to have an education system that will be well funded not only by the government and donor agencies but by everyone in the country.

There is the need to formulate clear educational policies and actively implement them to achieve results. Educational data must be generated to monitor results and educational managers must make sure that they carry out their duties efficiently, making sure that they understand that there will be consequences for their actions and that their priority is providing a quality education that is good for the country.

To effectively fund education in Ghana, the central government must:

- It is important that the government set up a funding formula that takes into account all the schools in the country, all the school districts and their needs, teachers' salaries, infrastructure and curriculum development, as well as the quality of students that these schools are producing.
- It is important to have a diverse funding formula that does not ignore any group in the country, but is effectively readjusted or assessed every other year to make sure that the funding formula is working to achieve the desired results in manpower development as well human resources.
- There should be a system resulting in every student being able to read and write and do basic mathematics; and this system should make sure that the students that are coming out of the high schools are good citizens who can participate in the democratic dispensation of the country.

The funding of education in Ghana has always been characterized by great disparities between the rich and the poor as well as the district in which a school is located. All these can affect the way funding is dispensed for school use.

Schools are also being overburdened with standards-based performance and accountability for test score improvements. Teachers are being overburdened while, at the same time, budgets are being cut from schools to support other activities. To better understand the funding of education in Ghana, we need to take into account the fact that most schools in Ghana are boarding schools; therefore funding does not only involve books, salaries for teachers, and the provision of classroom material; it also involves feeding and housing costs as well transportations and other costs associated with the

effective running of these boarding schools. The quality of education a student receives is determined by whether they are in private or public school, and whether the school is in an urban area or in a rural area. No matter what level we look at, inequitable distribution of funding for school is evident.

In 2005, the government identified the education sector as one area that will require funding and attention in order for the country to achieve a middle income status and for the provision of the Ghana's human capital requirements. The government has identified several goals that it wants to accomplish in the funding of education:

- Increase access to and participation in education and training at all levels;
- Bridge gender gaps in the delivery of education in all districts;
- Improve quality of teaching and learning at all levels;
- Improve efficiency in the delivery of education services;
- Promote science and technology education at all levels of education and increase the participation of girls in the field of science and technology;
- Enhance infrastructural development in education in the country at all levels.

All these goals, the government points out, are to help enhance the delivery and efforts of the government to attain a universal primary education that is free for all students.

The funding of education in Ghana can be complex and confusing sometimes, with donor agencies providing funds that come with strings attached. Sometimes these agencies do not adequately communicate their goals or objectives for the funding provided directly to the institution they are supporting and this prevents achieving

maximum output for their funds. In Ghana there is insufficient public financing for education, and therefore the cost continually keeps shifting to parents, which poses a problem for low income families who cannot afford the cost of education. Despite the disparity of incomes, it seems that the cost of education is the same for those from low income families as well those from high income families. This is one area that education in Ghana can learn from that of Alaska, where funding of education is the priority of the State and the Federal government.

In the World Bank's view, educational development in low income countries like Ghana must be combined with resource provision to the poor so that there will always be a return for the education sector. According to the World Bank, one of the first things poor people all over the world do with new income from micro enterprise is invest in their children's education.

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APPENDIX

Table A 1

	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	School District	PROJECTED FY08 ADM	PROJECTED FY08 Corresp. ADM	FY08 PROJECTED Total ADM	Adj for School Size ADM	District Cost Factor	Adjusted for Cost Factor	Special Needs Factor 1.20	Special Ed Int.	Adjusted for Spec Ed Int *5.00	Students + Intensive Special Education	District Corresp. 80%	District Adjusted ADM
2	Alaska Gateway	370.00	38.00	408.00	627.48	1.291	810.08	972.10	6	30	1002.10	30.40	1032.50
3	Aleutian Region	43.00	0.00	43.00	118.80	1.736	206.24	247.49	0	0	247.49	0.00	247.49
4	Aleutians East	244.00	0.00	244.00	453.98	1.423	646.01	775.21	0	0	775.21	0.00	775.21
5	Anchorage	47798.75	836.00	48634.75	52256.36	1.000	52256.36	62707.63	680	3400	66107.63	668.80	66776.43
6	Annette Island	323.25	0.00	323.25	461.31	1.011	466.38	559.66	4	20	579.66	0.00	579.66
7	Bering Strait	1705.00	0.00	1705.00	2744.93	1.525	4186.02	5023.22	17	85	5108.22	0.00	5108.22
8	Bristol Bay	178.00	2.00	180.00	281.26	1.262	354.95	425.94	3	15	440.94	1.60	442.54
9	Chatham	189.00	2.00	191.00	347.36	1.120	389.04	466.85	3	15	481.85	1.60	483.45
10	Chugach	75.00	135.00	210.00	150.94	1.294	195.32	234.38	0	0	234.38	108.00	342.38
11	Copper River	510.00	48.00	558.00	829.98	1.176	976.06	1171.27	10	50	1221.27	38.40	1259.67
12	Cordova	409.50	0.00	409.50	554.46	1.096	607.69	729.23	6	30	759.23	0.00	759.23
13	Craig	347.60	412.94	760.54	487.61	1.010	492.49	590.99	10	50	640.99	330.35	971.34
14	Delta/Greely	883.00	456.00	1339.00	1124.26	1.106	1243.43	1492.12	8	40	1532.12	364.80	1896.92
15	Denali	230.00	300.00	530.00	383.38	1.313	503.38	604.06	3	15	619.06	240.00	859.06
16	Dillingham	541.40	0.00	541.40	692.36	1.254	868.22	1041.86	8	40	1081.86	0.00	1081.86
17	Fairbanks	14108.00	281.00	14389.00	15976.37	1.039	16599.45	19919.34	262	1310	21229.34	224.80	21454.14
18	Galena	229.00	3400.00	3629.00	341.17	1.348	459.90	551.88	1	5	556.88	2720.00	3276.88
19	Haines	289.00	15.00	304.00	447.86	1.008	451.44	541.73	5	25	566.73	12.00	578.73
20	Hoonah	142.00	0.00	142.00	233.12	1.055	245.94	295.13	4	20	315.13	0.00	315.13
21	Hydaburg	75.00	0.00	75.00	122.85	1.085	133.29	159.95	1	5	164.95	0.00	164.95
22	Iditarod Area	255.00	100.00	355.00	495.49	1.470	728.37	874.04	0	0	874.04	80.00	954.04
23	Juneau	4989.00	92.00	5081.00	5454.53	1.005	5481.80	6578.16	145	725	7303.16	73.60	7376.76
24	Kake	98.00	0.00	98.00	152.06	1.025	155.86	187.03	4	20	207.03	0.00	207.03
25	Kashunamiut	350.00	0.00	350.00	490.20	1.389	680.89	817.07	4	20	837.07	0.00	837.07
26	Kenai Peninsula	8310.00	857.00	9167.00	10666.95	1.004	10709.62	12851.54	83	415	13266.54	685.60	13952.14
27	Ketchikan Gateway	2237.00	48.00	2285.00	2741.34	1.000	2741.34	3289.61	25	125	3414.61	38.40	3453.01
28	Klawock	135.00	0.00	135.00	223.35	1.017	227.15	272.58	3	15	287.58	0.00	287.58
29	Kodiak Island	2503.00	90.00	2593.00	3116.77	1.093	3406.63	4087.96	25	125	4212.96	72.00	4284.96
30	Kuspuk	400.00	0.00	400.00	727.00	1.434	1042.52	1251.02	0	0	1251.02	0.00	1251.02
31	Lake & Peninsula	374.50	0.00	374.50	772.30	1.558	1203.24	1443.89	2	10	1453.89	0.00	1453.89
32	Lower Kuskokwim	3981.00	0.00	3981.00	5849.52	1.491	8721.63	10465.96	61	305	10770.96	0.00	10770.96
33	Lower Yukon	2037.00	0.00	2037.00	3094.62	1.438	4450.06	5340.07	13	65	5405.07	0.00	5405.07
34	Mat-Su	14318.00	1217.00	15535.00	16483.78	1.010	16648.62	19978.34	125	625	20603.34	973.60	21576.94
35	Nenana	215.00	390.00	605.00	326.05	1.270	414.08	496.90	3	15	511.90	312.00	823.90
36	Nome	798.00	6.00	804.00	965.08	1.319	1272.94	1527.53	4	20	1547.53	4.80	1552.33
37	North Slope	1614.00	0.00	1614.00	2252.61	1.504	3387.93	4065.52	9	45	4110.52	0.00	4110.52
38	Northwest Arctic	1980.00	0.00	1980.00	2869.56	1.549	4444.95	5333.94	18	90	5423.94	0.00	5423.94
39	Pelican	18.00	0.00	18.00	39.60	1.290	51.08	61.30	0	0	61.30	0.00	61.30
40	Petersburg	579.00	0.00	579.00	788.49	1.000	788.49	946.19	11	55	1001.19	0.00	1001.19
41	Pribilof	128.00	0.00	128.00	223.11	1.419	316.59	379.91	0	0	379.91	0.00	379.91
42	Saint Mary's	170.70	0.00	170.70	271.99	1.351	367.46	440.95	1	5	445.95	0.00	445.95
43	Sitka	1432.00	36.00	1468.00	1719.27	1.000	1719.27	2063.12	36	180	2243.12	28.80	2271.92
44	Skagway	95.00	0.00	95.00	148.25	1.143	169.45	203.34	1	5	208.34	0.00	208.34
45	Southeast Island	185.40	2.00	187.40	411.83	1.124	462.90	555.48	5	25	580.48	1.60	582.08
46	Southwest Region	673.70	0.00	673.70	1123.81	1.423	1599.18	1919.02	6	30	1949.02	0.00	1949.02
47	Tanana	47.00	0.00	47.00	81.13	1.496	121.37	145.64	0	0	145.64	0.00	145.64
48	Unalaska	420.00	0.00	420.00	565.80	1.245	704.42	845.30	2	10	855.30	0.00	855.30
49	Valdez	751.00	0.00	751.00	958.37	1.095	1049.42	1259.30	11	55	1314.30	0.00	1314.30
50	Wrangell	360.00	0.00	360.00	501.00	1.000	501.00	601.20	1	5	606.20	0.00	606.20
51	Yakutat	104.00	0.00	104.00	177.16	1.046	185.31	222.37	0	0	222.37	0.00	222.37
52	Yukon Flats	266.68	0.00	266.68	494.21	1.668	824.34	989.21	5	25	1014.21	0.00	1014.21
53	Yukon/Koyukuk	350.00	1150.00	1500.00	646.20	1.502	970.59	1164.71	6	30	1194.71	920.00	2114.71
54	Yupiit	462.00	0.00	462.00	739.58	1.469	1086.44	1303.73	4	20	1323.73	0.00	1323.73
55	Mt. Edgecumbe	420.00	0.00	420.00	490.00	1.000	490.00	588.00	0	0	588.00	0.00	588.00
56													
57	TOTALS:	119,747.48	9,913.94	129,661.42	144,696.85	0.000	159,216.63	191,059.97	1,644	8,220	199,279.97	7,931.15	207,211.12

Table A 1 (Continued)

	A	B	C	D	E	F	G	H	I	J
1	School District	$5,380 Basic Need	Required Local Effort	Eligible Federal Impact AID	Impact AID Percent	Deductible Impact AID 90.0%	State AID	FY2008 PROJECTED Adjusted Floor	Quality Schools	FY08 PROJECTED Total State Entitlement
2	Alaska Gateway	5,554,850	0	245,277	100.00%	220,749	5,334,101	0	16,520	5,350,621
3	Aleutian Region	1,331,496	0	105,220	100.00%	94,698	1,236,798	19,808	3,960	1,260,566
4	Aleutians East	4,170,630	396,534	865,015	47.78%	371,974	3,402,122	0	12,403	3,414,525
5	Anchorage	359,257,193	88,989,480	11,570,436	55.90%	5,821,086	264,446,627	0	1,068,423	265,515,050
6	Annette Island	3,118,571	0	1,426,478	100.00%	1,283,830	1,834,741	0	9,275	1,844,016
7	Bering Strait	27,482,224	0	8,301,933	100.00%	7,471,740	20,010,484	0	81,732	20,092,216
8	Bristol Bay	2,380,865	630,578	216,583	71.51%	139,391	1,610,896	0	7,081	1,617,977
9	Chatham	2,600,961	0	221,932	100.00%	199,739	2,401,222	0	7,735	2,408,957
10	Chugach	1,842,004	0	99,457	100.00%	89,511	1,752,493	273,616	5,478	2,031,587
11	Copper River	6,777,025	0	275,663	100.00%	248,097	6,528,928	0	20,155	6,549,083
12	Cordova	4,084,657	662,014	40,306	47.18%	17,115	3,405,528	0	12,148	3,417,676
13	Craig	5,225,809	393,391	274,084	42.97%	105,997	4,726,421	0	15,541	4,741,962
14	Delta/Greely	10,205,430	0	106,127	100.00%	95,514	10,109,916	0	30,351	10,140,267
15	Denali	4,621,743	640,542	12,502	46.15%	5,193	3,976,008	0	13,745	3,989,753
16	Dillingham	5,820,407	670,693	637,370	56.84%	326,053	4,823,661	0	17,310	4,840,971
17	Fairbanks	115,423,273	23,962,498	11,404,060	59.07%	6,062,740	85,398,035	0	343,266	85,741,301
18	Galena	17,629,614	76,915	128,473	4.62%	5,342	17,547,357	0	52,430	17,599,787
19	Haines	3,113,567	942,101	0	66.30%	0	2,171,466	0	9,260	2,180,726
20	Hoonah	1,695,399	124,253	362,603	25.13%	82,010	1,489,136	0	5,042	1,494,178
21	Hydaburg	887,431	33,834	243,357	35.61%	77,993	775,604	9,014	2,639	787,257
22	Iditarod Area	5,132,735	0	545,480	100.00%	490,932	4,641,803	79,029	15,265	4,736,097
23	Juneau	39,686,969	13,485,969	0	62.26%	0	26,201,000	0	118,028	26,319,028
24	Kake	1,113,821	75,488	395,672	25.46%	90,664	947,669	0	3,312	950,981
25	Kashunamiut	4,503,437	0	1,658,684	100.00%	1,492,816	3,010,621	0	13,393	3,024,014
26	Kenai Peninsula	75,062,513	20,447,690	0	54.88%	0	54,614,823	0	223,234	54,838,057
27	Ketchikan Gateway	18,577,194	4,682,492	3,469	52.91%	1,652	13,893,050	0	55,248	13,948,298
28	Klawock	1,547,180	133,610	487,953	34.35%	150,851	1,262,719	0	4,601	1,267,320
29	Kodiak Island	23,053,085	4,141,788	1,435,942	47.23%	610,376	18,300,921	0	68,559	18,369,480
30	Kuspuk	6,730,488	0	1,459,639	100.00%	1,313,675	5,416,813	0	20,016	5,436,829
31	Lake & Peninsula	7,821,928	220,534	1,442,442	14.60%	189,537	7,411,857	0	23,262	7,435,119
32	Lower Kuskokwim	57,947,765	0	11,622,749	100.00%	10,460,474	47,487,291	0	172,335	47,659,626
33	Lower Yukon	29,079,277	0	8,966,263	100.00%	8,069,637	21,009,640	0	86,481	21,096,121
34	Mat-Su	116,083,937	20,975,565	0	52.99%	0	95,108,372	0	345,231	95,453,603
35	Nenana	4,432,582	81,591	1,296	81.67%	953	4,350,038	0	13,182	4,363,220
36	Nome	8,351,535	889,303	85,947	46.52%	35,984	7,426,248	0	24,837	7,451,085
37	North Slope	22,114,598	10,548,636	2,931,302	43.90%	1,158,157	10,407,805	0	65,768	10,473,573
38	Northwest Arctic	29,180,797	1,533,646	4,953,635	36.41%	1,623,257	26,023,894	0	86,783	26,110,677
39	Pelican	329,794	44,599	0	85.18%	0	285,195	115,072	981	401,248
40	Petersburg	5,386,402	1,048,787	0	51.13%	0	4,337,615	0	16,019	4,353,634
41	Pribilof	2,043,916	0	616,103	100.00%	554,493	1,489,423	0	6,079	1,495,502
42	Saint Mary's	2,399,211	19,160	0	27.37%	0	2,380,051	0	7,135	2,387,186
43	Sitka	12,222,930	3,162,938	15,038	60.85%	8,236	9,051,756	0	36,351	9,088,107
44	Skagway	1,120,869	526,955	0	55.87%	0	593,914	80,608	3,333	677,855
45	Southeast Island	3,131,590	0	22,208	100.00%	19,987	3,111,603	42,795	9,313	3,163,711
46	Southwest Region	10,485,728	0	2,838,701	100.00%	2,554,831	7,930,897	0	31,184	7,962,081
47	Tanana	783,543	23,603	14,085	100.00%	12,677	747,263	0	2,330	749,593
48	Unalaska	4,601,514	1,649,696	15,944	62.42%	8,957	2,942,861	0	13,685	2,956,546
49	Valdez	7,070,934	3,242,930	12,885	58.26%	6,756	3,821,248	0	21,029	3,842,277
50	Wrangell	3,261,356	572,448	2,245	68.59%	1,386	2,687,522	0	9,699	2,697,221
51	Yakutat	1,196,351	194,834	155,812	38.81%	54,424	947,093	21,556	3,558	972,207
52	Yukon Flats	5,456,450	0	645,293	100.00%	580,764	4,875,686	244,020	16,227	5,135,933
53	Yukon/Koyukuk	11,377,140	0	1,291,205	100.00%	1,162,085	10,215,055	0	33,835	10,248,890
54	Yupiit	7,121,667	0	1,917,899	100.00%	1,726,109	5,395,558	0	21,180	5,416,738
55	Mt. Edgecumbe	3,163,440	0	612,623	100.00%	551,361	2,612,079	0	9,408	2,621,487
56										26,027,300
57	TOTALS:	1,114,795,825	205,225,095	80,687,390		55,649,803	853,920,927	885,518	3,315,375	884,149,120